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PATENT

UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANTS: ZSCHUNKE ET AL 2 PCT  
Serial No.: 10/522,861 Group: 2631  
FILED: JANUARY 3, 2005  
FOR: METHOD FOR DIVIDING THE BIT RATE OF QPSK SIGNALS  
INTO TWO OR SEVERAL SUBCHANNELS

INFORMATION DISCLOSURE STATEMENT

Mail Stop: AMENDMENT  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA. 22313-1450

Dear Sir:

Applicants are enclosing Form PTO-1449 disclosing references cited in the present application and/or by the German Patent Office, and/or the German Priority Patent and/or International Search Report (copy enclosed).

REFERENCES CITED IN US SPECIFICATION

U.S. Patent No. 4,680,777 is discussed in the present Specification on page 3 in the first full paragraph.

The following references are enclosed:

"Nachrichtentechnik" [Communications Technology] by E. Herter/W. Lörcher, 5<sup>th</sup> edition, which appeared in the Hanser Verlag [publishing company] in 1990, pages 110 ff. discussed in the Specification on page 1 in the 2nd paragraph;

IEEE Transactions on Communications COM-15, No. 6 (December 1967) pages 805-811, discussed on page 23, in the first full paragraph;

D. Saha and G. Birdsall: IEEE Transactions on Communications 37, No. 5 (May 1989), pages 437 to 448 discussed on page 2 in line 8 of the Specification and in the German Priority document;

"Datenübertragung" [Data Transmission], Volume I, Fundamentals, 2<sup>nd</sup> edition 1983, Berlin, Springer Verlag [publishing company], ISBN 3-540-12117-X, pgs. 110 to 124 and pages 144-150 discussed in the Preliminary Amendment;

Manual by J. Huber: "Trelliscodierung" [Trellis Coding], Springer Verlag, 1992 under the series Nachrichtentechnik [Communications Technology], 21, ISBN 3-540-55792-X, pages 12, 13

discussed in the Preliminary Amendment.

The following references will be forwarded when they are available:

IEEE Transactions on Communications COM-29, No. 7 (July 1981), pages 982-989 discussed on page 23, in the first full paragraph;

IEEE Transactions on Communications, Vol. 42, No. 2/3/4, February/March/April 1994, page 1465 discussed in the Preliminary Amendment.

**CITED IN GERMAN PRIORITY DOCUMENT AND/OR BY THE GERMAN PATENT AND TRADEMARK OFFICE**

The following documents were cited in the German priority document and/or by the German Patent and Trademark Office:

SARI, Hikmet: A generalization of multidimensional modulation IN: IEEE Communications, 1995. ICC 95 Seattle, Gateway to Globalization, 1995 IEEE International Conference on, Volume:

2, 18-22 June 1995 Page(s): 683 - 687 vol 2.;

VIGIL, A. J. u .a.: Finite Truncated Cosine Series Design of Full Response Signaling Offset Quadrature Binary Modulation Systems, IN: IEEE Transactions on Communications, Vol. 42, No. 2/3/4, February/March/April 1994, 5. 1465- 1470;

VISINTIN, Monica u. a.: Four-Dimensional Signaling for Bandlimited Channels, / IN IEEE Transactions an Communications, Vol. 42, No. 2/3/4, February/March/April 1994, 5. 403 - 409;

The following references will be forwarded when they are available:

BOCKER, Peter: Datenubertragung, Band I, Grundlagen, 2. Aufl. 1983, Berlin u. a., Springer-Verlag, ISBN 3-540-12117-X, S. 110- 124 u. 144- 150.

**REFERENCES CITED IN THE INTERNATIONAL SEARCH REPORT:**

The following two (2) references cited in the International

Search Report, are also enclosed:

Gruenbacher D M et al: "N Dimensional Orthogonal QPSK Signaling with Discrete Prolate Spheroidal Sequences" Radio and Wireless Conference, 1998, Colorado Springs, Co, USA 9-12 August 1998, Pages 63-68, Xp 010296329 New York, USA, and Waldeck B H et Al:

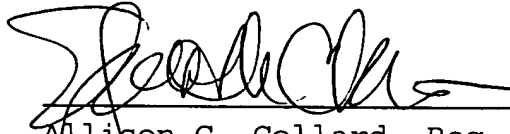
"Performance Evaluation of TFO-Q2PSK in Gaussian, Multipath and Fading Channels" 1999 Ieee Africon 5th, Africon Conference in Africa, Cape Town, South Africa, 28 September 1999- October 1999, Pages 233-238 XP 000895832 New York, USA.

Since this Information Disclosure Statement is being filed prior to a first Office Action, it is believed that no fee is due. However, if it is determined that a fee is due, the Commissioner is hereby authorized to charge, or to credit any over payment, to our Deposit Account Number 03-2468.

It is respectfully requested that this Information

Disclosure Statement be considered and placed into the  
application file.

Respectfully submitted,  
Wilmut ZSHUNKE ET AL 2 PCT




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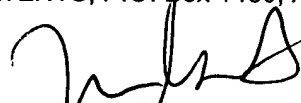
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Reg No. 35,103

Enclosures: PTO-form 1449  
International Search Report  
International Preliminary Examination Report  
10 References

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: COMMISSIONER OF PATENTS, P.O. Box 1450, Alexandria, VA 22313-1450 on November 14, 2005.

  
Maria Guastella

FORM PTO-1449 (Modified) (REV. 7-80)		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		ATTY. DOCKET NO.: <b>ZSHUNKE ET AL 2 PCT</b>		SERIAL NO.: <b>10/522,861</b>	
LIST OF REFERENCES CITED BY APPLICANT (Use several sheets if necessary)				APPLICANT: <b>Wilmut ZSHUNKE ET AL</b>			
				FILING DATE: <b>JAN. 31, 2005</b>		GROUP: <b>2631</b>	
U.S. PATENT DOCUMENTS							
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	AA	4680777	7/1987	SAHA (German Priority)			
	AB	6278732	8/2002	BEIDAS BASSEL F ET AL (Intl. Srch. Rep.)			
FOREIGN PATENT DOCUMENTS							
		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION
							YES NO
	AC						
	AD						
OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, Etc.)							
AE	<b>"Datenübertragung"</b> [Data Transmission], <b>BOCKER</b> , Peter, Volume I, Fundamentals, 2nd edition 1983, Berlin, Springer Verlag [publishing company], ISBN 3-540-12117-X, pgs. 110 to 124 and pages 144-150 <b>((German Priority, Preliminary Amendment) ENCLOSED)</b>						
AF	<b>Gruenbacher D M et al:</b> "A Simple Algorithm for Generating Discrete Prolate Spheroidal Sequences: IEEE Transactions on Signal Processing Vol. 42, No. 11, November 1994 Page 3276-3278, XP 002269014 New York, USA (Intl. Srch. Rep.) <b>TO FOLLOW</b>						
AG	<b>Gruenbacher D M et al:</b> "N Dimensional Orthogonal QPSK Signaling with Discrete Prolate Spheroidal Sequences" Radio and Wireless Conference, 1998, Colorado Springs, Co, USA 9-12 August 1998, Pages 63-68, XP 010296329 New York, USA (Intl. Srch. Rep.) <b>ENCLOSED</b>						
AH	<b>Huber, J, Manual .:</b> "Trelliscodierung" [Trellis Coding], Springer Verlag, 1992 under the series Nachrichtentechnik [Communications Technology], 21, ISBN 3-540-55792-X, pgs 12, 13 <b>(Preliminary Amendment &amp; German Priority) ENCLOSED</b>						
AI	<b>SAHA, Debarata, BIRDSALL, Theodore G.:</b> Quadrature-Quadrature Phase-Shift Keying, IN: IEEE Transactions and Communications, Vol. 37, No. 5, May 1989, S.437 - 448. <b>(Specification &amp; German Priority) ENCLOSED</b>						
AJ	<b>IEEE Transactions on Communications COM-29, No. 7 (July 1981), pages 982-989 (Specification)(NOT PRESENTLY AVAILABLE.)</b>						
EXAMINER				DATE CONSIDERED			
*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.							

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<b>OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, Etc.)</b>							
AA	<b>SARI, Hikmet:</b> A generalization of multidimensional modulation IN: IEEE Communications, 1995. ICC 95 Seattle, Gateway to Globalization, 1995 IEEE International Conference on, Volume: 2, 18-22 June 1995 Page(s): 683 - 687 vol 2. <b>(German Priority) ENCLOSED</b>						
AB	<b>VIGIL, A. J. u. a.:</b> Finite Truncated Cosine Series Design of Full Response Signaling Offset Binary Modulation Systems, IN: IEEE Transactions on Communications, Vol. 42, No. 2/3/4, February/March/April 1994, 5. 1465- 1470. <b>(German Priority) ENCLOSED</b>						
AC	<b>Waldeck B H et Al:</b> "Performance Evaluation of TFO-Q <sup>2</sup> PSK in Gaussian, Multipath and Fading Channels" 1999 IEEE Africon 5 <sup>th</sup> , Africon Conference in Africa, Cape Town, South Africa, 28 September 1999- October 1999, Pages 233-238 XP 000895832 New York, USA <b>(Intl. Srch. Rep.) ENCLOSED</b>						
AD	<b>"Nachrichtentechnik"</b> [Communications Technology] by <b>E. Herter/W. Lörcher</b> , 5th edition, which appeared in the Hanser Verlag [publishing company] in 1990, pages 110 ff. <b>(Specification) ENCLOSED</b>						
AE	<b>IEEE Transactions on Communications COM-15, No. 6 (Dec. 1967) pgs 805-811 SALTZBERG, Burton, R. (Specification) ENCLOSED</b>						
AF	<b>IEEE Transactions on Communications, Vol. 42, No. 2/3/4, February/March/April 1994, pages 1465 (Preliminary Amendment) TO FOLLOW</b>						
AG	<b>IEEE Transactions on Communications, Vol. 42, No. 2/3/4, February/March/April 1994, S. 403 - 409. VISINTIN, Monica u. a.:</b> Four-Dimensional Signaling for Bandlimited Channels, / IN <b>(German Priority) ENCL.</b>						
AH	<b>INTERNATIONAL SEARCH REPORT - ENCLOSED</b>						
AI	<b>INTERNATIONAL PRELIMINARY EXAMINATION REPORT - ENCLOSED</b>						
AJ							
AK							
AL							
AM							
EXAMINER				DATE CONSIDERED			
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